Geography
Mapping the Earth

Pupil Workbook
Year 6 Unit 5

Name:
1.1 What is Geography?
The study of geography is split into:

Physical Geography
The study of natural features of the world such as rivers, coasts, mountains, ecosystems, weather and climate.

Human Geography
This focuses on the study of human interaction with the environment such as buildings or networks.

Environmental Geography
This focuses on how human geography and physical geography interact together.

1.1 Continents and Oceans

1.2 UK Geography

Capital Cities
England – London
Scotland – Edinburgh
Wales – Cardiff
Northern Ireland – Belfast

Physical Features
River Thames
Snowdon
River Severn
Ben Nevis
Forest of Dean
Lake Windermere

1.2 Compass Directions

North – Naughty
East - Elephants
South - Squirt
West – Water

1.3 Figure Grid References
Grid Reference
A map reference indicating a location.

How to read:
Step 1 – Locate the place you want on the map.
Step 2 – Count across the X axis lines until you reach the line on the left of the location. Write down the number.
Step 3 – Count up the Y axis until you reach the line below the location. Write down the number.
Step 4 – Your 4 figure grid reference should be split up by a comma.

1.3.6 Figure Grid References
Sometimes you have to be more precise. This is for 6 figure grid references.

Is at (47x,33y) we need to find x and y.

Step 5 – Split the box up into 10 on the X and Y axis.
Step 6 – Count across the X axis and enter the number.
Step 7 – Count up the Y axis and enter the number.

1.4 Contours and Relief

Contours
Lines on a map which join up areas of the same height.
Usually orange.

Relief
The shape of the land.

If the contours are close the land is STEEP. If they are spaced out the land is SHALLOW.

The height is sometimes written on the contour line.

1.4 Contours

Plain hill

Steep hill with a peak 310m above sea level.

Shallow slope as the lines are far apart.

1.5 Scale

Scale
The ratio of a distance on the map to the corresponding distance on the ground.

E.g. on a 1:3 map
1cm on the map is : 3cm on the ground.
2cm on the map is : 6cm on the ground.
3cm on the map is : 9cm on the ground.

1.6 Scale of maps

OS maps are usually 1:25,000 or 1:50,000 scale.

Measure the map with a ruler.

Sometimes maps have a scale line like this:

We use a ruler to measure the map distance and compare it to the scale line.
**Existing Knowledge**

What do you know about Maps? Try to name 5 facts. Below are some pictures to help.

1. A map is a drawing of a particular area such as a city, a country, or a continent, showing its main features as they would appear if you looked at them from above.

2.

3.

4.

5.
Session 1:

What is the purpose of different maps and what are their features?

<table>
<thead>
<tr>
<th>Key Knowledge</th>
<th>Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps and plans are views from above or a ‘bird’s eye view’ of a place and use symbols.</td>
<td>Cartography</td>
</tr>
<tr>
<td>Cartography is the business of making maps. The terms 'mapmaking' and 'cartography' essentially mean the same thing: taking geographical information and transforming it into a map.</td>
<td>Cartographers</td>
</tr>
<tr>
<td>Different maps serve different purposes depending on what they’re designed for.</td>
<td>Continent</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
</tr>
<tr>
<td></td>
<td>Human</td>
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</tbody>
</table>

Reviewing Learning: Maps- Continents and Oceans

Continents:

a) __________________________
b) __________________________
c) __________________________
d) __________________________
e) __________________________
f) __________________________
g) __________________________

Oceans:

1) __________________________
2) __________________________
3) __________________________
4) __________________________
5) __________________________
When might we use a map?

- Which map would you use if you were locating your house or the school?
- Which map would you use if you were planning a journey on the underground?
- Which map would be most useful if you were looking for the local post office or information centre?
- Which maps depict human features, and which depict both human and physical features of the environment?

Task: Use the pictures prompts below to help you answer the above questions.

We can use different maps to help us locate different places.
**Task:** Do you agree with Archie? Share your thinking.

What is the purpose of a map?

Maps and plans are views from above or a ‘bird’s eye view’ of a place and use symbols. Maps and plans show the distance between places or objects accurately, through using a map scale. They can be drawn at different levels of detail: from the positions of objects in a room (a plan) to the location of countries, continents and oceans in the world (a world map).

The purpose of a map depends on the type of map being used. For example, the purpose of a topography map is to identify different elevations (height) of geographical physical features.

**Task:** Why do we use a map?

What are the different types of map?

**Physical Maps**

A physical map usually includes labels for features such as mountain ranges and bodies of water. In this map of North America, the shape and contours of the seafloor, such as basins and the Mid-Atlantic Ridge, are clearly identified.

**Political Maps**

A political world map usually includes labels for features such as cities and major towns, units such as states and bodies of water.
Climate Maps

This thematic map shows the distribution of climate zones in South America. It also displays the direction of surface ocean currents in the Atlantic and Pacific Ocean. Red and blue colouring is used to distinguish between warm and cold ocean surface currents.

Topographic Maps

A topographic map is a detailed and accurate two-dimensional representation of natural and human-made features on the Earth’s surface. These maps contain contour lines to join up places of equal height.

Task: List four types of map:

- _________________________________
- _________________________________
- _________________________________
- _________________________________

What are the different features of a map?

A map of the school grounds is a ‘smaller scale’ map than the map of the classroom as it represents a larger space at a lower level of detail. Using a map scale means the distance between places is shown accurately. Map symbols are pictures to represent human (man-made) and physical (natural) features of the landscape. Symbols are useful as they prevent maps from being covered in too many word labels. Map keys show what each symbol means. An aerial photo is a photograph from above. Photos from above help people draw maps accurately.
**Task:** Can you spot the above features in the map below? Label where they are.

**Challenge:** What geographical features can you spot? E.g. beaches/rivers. Which are human features, and which are physical features? Label them on the map too.

**Reminder:**
Session 2:

How do compass points and grid reference help us navigate a map?

<table>
<thead>
<tr>
<th>Key Knowledge</th>
<th>Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ A compass helps us to navigate a map and has compass direction points e.g. ‘north-west’</td>
<td>□ Ordnance Survey</td>
</tr>
<tr>
<td>□ Ordnance Survey is the national mapping agency for Great Britain.</td>
<td>□ Eastings</td>
</tr>
<tr>
<td>□ Ordnance Survey uses a grid system with numbered squares to map locations.</td>
<td>□ Northing</td>
</tr>
<tr>
<td></td>
<td>□ Grid reference</td>
</tr>
</tbody>
</table>

Knowledge Quiz

1. Which of these is a human feature?
   - A river
   - A mountain
   - A bridge
   - A lake

2. What type of map would contain contour lines?
   - Climate map
   - Topographic map
   - Political Map
   - Physical Map

3. What feature helps me understand the physical distance between places?
   - Symbol
   - Key
   - Scale
   - Title

4. What feature of a map shows me what symbols mean?
   - scale
   - key
   - Contour lines
   - Aerial photo
Compass Points

Compass directions are vital for finding your way around a map. There are many ways to remember where each direction goes. You probably learnt a rhyme or a phrase to help you remember - if not, here's one now. Starting at the top and moving clockwise the directions on a compass or map are:

- North - Naughty
- East - Elephants
- South - Squirt
- West - Water

The top of most maps is north, and a compass can be used to find which direction north is. The needle always points north, so when that is lined up with the map it is easy to see in which direction things are. These points can be further broken down and be defined by 8-point compass directions as shown below.

**Task:** Complete the labels on the 8-point compass below.
Ordnance Survey and Grid Reference

Ordnance Survey is the national mapping agency for Great Britain. Ordnance Survey maps use a grid system with numbered squares. The grid lines that run up and down the map vertically are called Eastings. They increase in number the further you move east (or right). You can use them to measure how far to travel east. Northings are lines that run across the map horizontally. They increase in number the further you move north (or up the map). You can use them to measure how far to travel north.

Grid lines are used to locate different symbols or features on an OS map. Four-figure grid references allow you to locate a grid square and six-figure grid references allow you to identify a specific symbol.

In the diagram above the four-figure grid reference for the square marked X is 8109. The six-figure grid reference for the X is 817098.
**Scale**

Being able to measure the distance between two points on a map is very important. It allows you to work out what distance is in real life and will give you a good idea of how long your journey will take. Every Ordnance Survey map is printed with a scale bar that converts the distance you measure on a map (usually in centimetres or inches) into a real-life distance (usually in kilometres or miles).

A quick way to measure distance is to count each square you cross on the map. On your Ordnance survey map each grid square measures one kilometre from side to side and from top to bottom. If you go diagonally across a square, the distance will be a bit longer – about 1.5 km. Measuring in straight lines is sometimes called as the crow flies and can be useful over longer distances, for example, to find out how far one town or city is from another.

On the paper’s edge: another method of measuring distance is to take a sheet of paper and place the corner of a straight edge on your starting point. Now pivot the paper until the edge follows the route that you want to take. Every time the route disappears or moves away from the straight edge of your paper, make a small mark on the edge and pivot the paper so the edge is back on course. Repeat this process until you reach your destination. You should be left with a series of marks along the edge of your paper. You can now place the sheet against the scale bar on your map. The last mark you made will tell you the real distance you need to travel.

**Task:** Complete the treasure hunt using your knowledge of grid reference and compass points. Follow the instructions carefully. Write the treasure here!
Treasure Hunt

Follow the clues to find the treasure in the form of a slogan.

1. Start at 303794.
2. Head North for 1km. Take the first letter of the station you have arrived at. Take care—there are 2 stations close together!
3. Go East for 2km. You will find yourself at a building. What type of building is it? Take the first letter. Clue: The Natural History and Science are types of these.
4. From here head to 320811. Take the first letter from the name of the holy person found here.
5. Head North North West. For ¾ of a kilometre. You will find yourself at an arts centre. Take the second letter from the name of this centre.
7. Head South West for 1km. You will find yourself at a station. Take the first letter of the name of this station.
8. Head to 304789. You will find yourself in the middle of a bridge. Take the first letter of the name of the bridge.
9. Now go North until you come to 304807. Write the third letter of the name you see.
10. You now have all of the clues. Rearrange the letters to make a slogan.

Bonus: The name you found at 9 is the name of a street. There was a song about this street. Can you find the name of the fruit mentioned in this song?

Congratulations! You have completed the Treasure Hunt
Session 3:
What is longitude and latitude?

### Key Knowledge
- Lines of latitude and longitude are used to locate places accurately on the Earth's surface.
- The starting point for measuring longitude is called the Prime Meridian.
- Two imaginary lines that circle the globe mark the boundaries of the tropics. The line called the Tropic of Cancer marks the northern edge. Its latitude (distance from the Equator) is $23^\circ27'N$. The line called the Tropic of Capricorn marks the southern edge. Its latitude is $23^\circ27'S$.

### Key Vocabulary
- Longitude
- Latitude
- Equator
- Prime Meridian
- Hemisphere

### Knowledge Quiz

1. What direction does the needle on a compass typically point?
   - East
   - South
   - North
   - West

2. Who is the national agency for mapping in Great Britain?
   - Ordnance Survey
   - Maps UK
   - National Geographic
   - Atlas UK

3. Which grid reference allows you to identify a specific symbol?
   - 2-figure grid reference
   - 6-figure grid reference
   - 1-figure grid reference
   - 3-figure grid reference

4. What real life distance is used in OS maps?
   - Kilometres
   - Centimetres
   - Metres
   - Millimetres

### Longitude and Latitude
*(Building Geography Skills for Life)*

Lines of latitude and longitude are used to locate places accurately on the Earth's surface. Latitude lines, called parallels, run east and west around the earth. Longitude lines, called meridians, run north and south. Latitude and longitude are measured in degrees. The shape of the earth is a sphere. It is 360 degrees around a sphere. Each degree of latitude or longitude is $1/360$th of the distance around the earth. The symbol for degree is °. The starting point for measuring degrees of latitude is the Equator.

The Equator is a line of latitude. It divides the earth into two equal parts. The Equator runs east and west all the way around the world, halfway between the North and South Poles. The Equator is at the centre of
the lines of latitude and is at 0° latitude. Anything lying south of the Equator is in the Southern Hemisphere and is labelled °S. Anything lying north of the Equator is in the Northern Hemisphere and is labelled °N. The North Pole is 90° N and the South Pole is 90° S.

The line labelled 0° longitude is called the Prime Meridian or the Greenwich Meridian and runs through London. Anything lying east of the Greenwich Meridian is in the Eastern Hemisphere and is labelled °E. Anything lying west of the Greenwich Meridian is in the Western Hemisphere and is labelled °W.

The starting point for measuring longitude is called the Prime Meridian. Meridian is another name for a longitude line. The earth does not have an east pole and a west pole. Therefore, some point had to be chosen as the starting point for measuring longitude. Through international agreement, Greenwich, England, was chosen as this place. All longitude is measured from the Prime Meridian that runs from the North and South Poles through Greenwich, England.

Two imaginary lines that circle the globe mark the boundaries of the tropics. The line called the Tropic of Cancer marks the northern edge. Its latitude (distance from the Equator) is 23°27′ N. The line called the Tropic of Capricorn marks the southern edge. Its latitude is 23°27′ S. The tropics are the only part of Earth where the Sun sometimes shines straight down. Because the sunlight is so strong, the tropics are generally warmer than other parts of Earth. Tropical temperatures are warm or hot throughout the year. The temperatures do not change greatly, but winds and rain bring different types of weather. Most tropical places experience wet and dry seasons.

Areas closest to the Equator are the wettest. A great deal of rain falls year-round. Dense rainforests cover the land. The largest tropical rainforests on Earth lie in Brazil and in parts of Africa. The climate is drier in tropical regions that lie farther north and south of the Equator. In these regions there are one or two dry seasons each year. The forests may be deciduous, meaning that the trees shed their leaves during the dry periods. Savannas, or grasslands with scattered trees, are also common.

The driest parts of the tropics lie near the northern and southern edges. Here the dry season is long. Few trees grow. Shrubs and low grasses cover the land. Two of Earth’s big deserts, the Sahara and the Kalahari, lie on the edges of the tropics.

**Task:** Complete the sentences on the next page.
This line of **latitude** is called the _____________. It is _____ degrees _______ of the _____________.

This line of **latitude** is called the **Tropic of _____________.** It is _____ degrees _______ of the _____________.

This line of **latitude** is called the _____________. It is _____ degrees _______ of the _____________.

This line of **latitude** is called the _____________.

This line of **latitude** is called the _____________.

This line of **longitude** is called the _____________.
**Challenge:** What would you assume about the climate in Luanda (located on the map) based on its position in relation to the equator and why? Explain using the key vocabulary below.

*Equator   South   Climate   Tropics*
Session 4:

Why are time-zones different across the globe?

<table>
<thead>
<tr>
<th>Key Knowledge</th>
<th>Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>A time zone is a region on Earth that uses a uniform time.</td>
<td>Time zones</td>
</tr>
<tr>
<td>They are often based on boundaries of countries or lines of longitude.</td>
<td>Greenwich Mean Time</td>
</tr>
<tr>
<td>Greenwich Mean Time (GMT) is the mean solar time at the Royal Observatory located in Greenwich, London, considered to be located at a longitude of zero degrees.</td>
<td>Longitude/Latitude</td>
</tr>
<tr>
<td></td>
<td>UTC</td>
</tr>
</tbody>
</table>

Knowledge Quiz

1. What are longitude and latitude measured in?
   - Centimetres
   - Metres
   - Degrees
   - Fahrenheit

2. What degree of latitude does the Equator sit at?
   - 0 degrees
   - 23.5 degrees
   - 90 degrees
   - 66.5 degrees

3. What is the starting point for measuring longitude?
   - Tropic of Cancer
   - Equator
   - South Pole
   - Prime Meridian

4. What line marks the northern edge of the tropics?
   - Tropic of Capricorn
   - Tropic of Cancer
   - Equator
   - Prime Meridian

5. The ‘Prime Meridian’ runs through which city?
   - London
   - New Delhi
   - Paris
   - Buenos Aires
Time Zones

As the Earth rotates on its axis, the Sun only shines on the side of the Earth that it is facing. This means:

- it is daytime for the parts of the Earth that have the Sun shining on them
- it is night-time for places that are on the opposite side of the Earth and are in the shade

As it is night in some parts of the world while it is day in other parts, different places in the world have different times. This is why the world is divided into 24 different time zones. One for each hour in a day. Very large countries that are spread out across many time zones, such as Russia or the USA, are divided into separate time zones. Smaller countries keep to the same time zone even if part of them falls outside a meridian line. On this map the minus numbers (e.g. -5) mean that place has that number of hours less in the day and the plus numbers (e.g. +5) mean that place has that number of hours more left in the day.

**Task:** Using the map, identify how many hours in front or behind GMT (Greenwich Mean Time) each of the countries below are:

- Algeria
- China
- Australia
Greenwich Mean Time

Greenwich Mean Time (GMT) began to be used locally in Greenwich in 1675, when the Royal Observatory at Greenwich was built, to help ships navigate using lines of longitude. At that time, each city in England used its own local time. GMT was adopted nationally, predominantly to enable railway timetabling, and became officially recognised as the standard in Britain in 1880. Now, every place in the world is divided into time zones and the terminology of Greenwich Mean Time in international time zones has been replaced by Co-ordinated Universal Time (UTC).

Times in certain places can vary during the year due to local adjustments. For example, in the UK during British Summer Time, the clocks go forward one hour so the UK time becomes UTC+1. When the clocks go back one hour in the autumn, the UK reverts back to UTC.

Task: Using the above map, can you name two places whose time is ahead of yours (later than yours) and two places whose time is earlier than yours? Can you also calculate, what time it is?

Ahead: .......................................................... ..........................................................

Earlier: .......................................................... ..........................................................

Task: Answer the following questions:

Which countries do not follow a standard time zone? (They have a half in their number)

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

Which countries contain more than one time zone? Why do you think this is?

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
How do you think it feels when you fly from one country to another and end up living in a completely different time zone?

______________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________

Can you explain what time zones are using your own words?

______________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________
Session 5:

**Case Study:**

Where in the world are the Antarctic and Arctic?

<table>
<thead>
<tr>
<th>Key Knowledge</th>
<th>Key Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ The Antarctic is a continent and the Arctic is not</td>
<td>□ Arctic</td>
</tr>
<tr>
<td>□ Both areas have extreme climates characterized by extreme lows of temperature.</td>
<td>□ Antarctic</td>
</tr>
<tr>
<td>□ Both areas have a diverse and perfectly adapted flora and fauna.</td>
<td>□ Pole</td>
</tr>
<tr>
<td>□ Both areas are the magnetic poles that are indicated as the North and South indices on a compass</td>
<td>□ Continent</td>
</tr>
<tr>
<td>□ The Arctic is in the Northern hemisphere and the Antarctic is in the southern hemisphere.</td>
<td></td>
</tr>
</tbody>
</table>

**Knowledge Quiz**

1. How many time zones is the world divided into?

   - 6
   - 2
   - 12
   - 24

2. How many hours behind GMT is Greenland?

   - 2
   - 4
   - 1
   - 3

3. In what year was Greenwich Mean Time used locally?

   - 1675
   - 1880
   - 1674
   - 1991

4. In what season does UK time go back one hour?

   - Spring
   - Autumn
   - Summer
   - Winter
The Arctic is located at the northernmost part of our planet. Scientists usually define the Arctic as the area above the ‘Arctic Circle’ — an imaginary line that circles around the top of the globe.

The Arctic consists of the Arctic Ocean and parts of Canada, Russia, the USA, Greenland, Norway, Finland, Sweden and Iceland.

Because of the Earth’s tilt, for at least one day a year there’s an entire day of darkness in this freezing region — and also a full day of sunshine.

Temperatures as low as –70°C have been recorded in northern Greenland. This is compared to the UK record in Aberdeenshire in Scotland with an overnight low of -27.2°C.

Despite the freezing-cold temperatures, approximately four million people call this area home. Amongst these are the indigenous people of the Arctic, called the ‘Inuits’.

In 1958, a submarine called the USS Nautilus sailed beneath the frozen ice of the Arctic Ocean. This was proof that the enormous ice sheet rests on water and not land. The artic is NOT a continent as the Ice sheet has no physical connection with the seabed and therefore is not “landmass”.

The Arctic is home to a wide variety wildlife, including polar bears, Arctic foxes, walruses, seals and whales.

One species found only in the Arctic is the narwhal, often referred to as the ‘unicorn of the sea’, male narwhals have a straight tusk projecting from the front of their head that can grow to over 3m in length.

The word ‘Arctic’ comes from the Greek word for bear, Arktos. It’s believed the name refers to two constellations that can be seen in the northern sky — ‘Ursa Minor’ (Little Bear) and ‘Ursa Major’ (Great Bear).

The ice of the Arctic contains around ten percent of the world’s fresh water. This giant, white, frozen reservoir reflects sunlight, helping keep the region cool. It also plays an important role in keeping our global climate stable. Arctic sea ice reaches its minimum each September. Arctic sea ice is now declining at a rate of 12.85 percent per decade, relative to the 1981 to 2010 average. This information is derived from satellite observations.
Antarctica is the southernmost continent on Earth. Unlike the Arctic Antarctica is a land mass and therefore a proper continent.

The South Pole is found in Antarctica. This is the southern magnetic pole and ground the earth’s magnetic field as the SOUTH. A compass needs southern indicator will point towards the Southern pole.

Antarctica is surrounded by the Southern Ocean. Like the Arctic there are extensive ice sheets that cover the land mass BUT crucially Antarctica is connected to the sea floor and therefore you cannot sail underneath the area in a submarine.

Antarctica is bigger than Europe and almost double the size of Australia.

Most of Antarctica is covered in ice over 1.6 kilometres thick (1 mile). This is significantly more ice than the Arctic due to the continental effect brought about by the size of the Antarctic.

Because it experiences such little rain, Antarctica is considered a desert.

The coldest recorded temperature on Earth occurred in 1983 at Vostok Station, Antarctica, measuring a rather chilly −89.2 °C (−128.6 °F).

While humans don’t permanently reside in Antarctica, several thousand people live and work at various research facilities found on the continent. There are no indigenous people like the Arctic. While Antarctica features harsh living conditions, a number of plants and animals have adapted to survive and call the icy continent home. Animals such as various species of seals, sealions, penguins and other seabirds.

The name ‘Antarctica’ comes from a Greek word meaning ‘opposite to the north’.

Around 90% of the ice on Earth is found in Antarctica.

Sea levels would rise around 60m (200ft) if all the ice in Antarctica were to melt. This would have a colossal impact of low-lying cities like London would disappear.
Task: Describe the Arctic and the Antarctic in your own words:

The Arctic:

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

The Antarctic:

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
**Task:** Complete the table to how similarities and differences between the Arctic and Antarctic before describing those similarities and differences in your own words.

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Session 6: How can we apply our map work skills?

### Key Knowledge

| □ | A scale shows you the distance between two points |
| □ | A scale can make large real-life places fit into a much smaller representation |
| □ | An x-axis goes across on a grid (horizontal) |
| □ | A y-axis goes up and down on a grid (vertical) |
| □ | Map |
| □ | Scale |
| □ | Axis |
| □ | Target |

### Key Vocabulary

- Map
- Scale
- Axis
- Target

### Knowledge Quiz

1. Which of these is not a continent?

   - Asia
   - Europe
   - United Kingdom
   - South America

2. What percentage of the world’s ice is in Antarctica?

   - 80%
   - 90%
   - 50%
   - 20%

3. What species of animal is only found in the Arctic?

   - Polar Bears
   - Narwhal
   - Whales
   - Seals

4. What would sea level rise to if all the ice in the Antarctica were to melt?

   - 10 metres
   - 50 metres
   - 60 metres
   - 100 metres

5. In 1958 a submarine passed under the Arctic – what was the name of the submarine?

   - HMS Penguin
   - USS Nautilus
   - HMS Arctic
   - HMS King
A map is a graphical representation of an area.

Use the grid below to help you map out a space. This could be a space where you live or in your locality.

1. Devise a scale – an easy scale for a small space might be 1 box per one step or 2 steps per box.
2. Label the x and y axis so that you can make easy reference points using simple coordinates.
3. Map out the space starting from a fixed point like a door or your bed but something you can return to map out a relative distance.
4. Make a list of coordinates in the table to show the position of certain targets in that space

<table>
<thead>
<tr>
<th></th>
<th>X Axis</th>
<th>Y Axis</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position 2</td>
<td></td>
<td></td>
<td></td>
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Final Essay Question:
How do maps help us to understand a place and what might life be like without them?